Mediawatch

Gaur power

Richard F. Harris

The humble Asian ox called the gaur has picked up where Dolly the sheep left off. In October, news consumers everywhere learned that this animal was about to be rescued from the brink of extinction through cloning, thanks to the work of a US biotech company, Advanced Cell Technology.

'Extinction Could Be a Thing of the Past,' heralded *The Independent* (London). "It is the first endangered species ever to be cloned, and the first cloned animal to gestate in the womb of another species," reported the *Washington Post*, which broke the story about how the nucleus from a gaur's skin cell had been transplanted into a cow oocyte and was, at that very moment, incubating in the uterus of a cow in Iowa named Bessie. The gaur was even named (Noah) before birth. After all, it was the only clone that survived that far, and it wouldn't be much of a story if it turned out to be stillborn.

The gaur was a great hook for the company's grander plans. ACT scientists say they hope to use a similar technique to bring one species back from extinction — a Spanish mountain goat, the bucardo, whose lineage came to an end when the last member of the species was killed by a falling tree. Cells from that animal, a female, were frozen, and may now be resurrected through cloning. Getting a male to perpetuate this species is going to be trickier — ordinary goat chromosomes will probably be required. Even if that works, the genetic prospect of mating two clones together seems dim at best. And gaurs and goats are just the beginning of the dreams.

'Breakthrough Might Help Clone Pandas,' *The New York Post* announced when the news of the gaur broke. All the scientists need is access to some frozen panda cells (not currently forthcoming), eggs from wild North American bears (not too hard to come by) and surrogate bear mothers in captivity, should any of the nuclear transfer experiments into bear eggs actually work. This is getting just a bit ahead of the story, considering the state of the gaur research. The bovine-to-bovine procedure was hardly a snap: as *Newsweek* and other journals noted, out of 692 fused cells, 81 grew at least initially, 44 were implanted into surrogate mothers, and only one remained viable when the publicity tap was turned on.

The gaur is actually a poor poster child for salvation through cloning

Journalists everywhere simply accepted ACT's word that the gaur is endangered. In fact, a few reports mentioned there are perhaps 36,000 of these animals in the wild. Anybody bothering to look would have found that they are listed as vulnerable, not endangered, in the International Conservation Union's Red List. And should gaurs stagger closer to the brink of extinction, it should have been worth noting that they breed just fine in captivity. So the gaur is actually a poor poster child for salvation through cloning.

Many reports did note that cloning is not the favored approach to saving species from extinction, considering that the overwhelming problem is human beings wiping out habitat. "There is a very hollow echo of a gaur in the birth of that animal to a cow in Iowa," Kent Redford with the Wildlife Conservation Society in New York told the *Washington Post*. "To say that is a gaur is to disrespect all gaurs in all the places where gaurs live. That animal will never live its life in true gaurdom, to wander in the forests of India and frolic with other gaurs and die and let teak trees grow out of it. That's the gaur I'm working to save."

The New York Times (among others) asserted the cloned gaur would be "an exact genetic copy of the gaur from which the skin cell was obtained." But a few journalists noted that the gaur's mitochondrial DNA will actually come from the cow's egg. In the case of a male, that would be bred out if and when he mates with a gaur, but a female gaur produced like this would carry a few cow genes forevermore.

Of course, it would be impossible to avoid a few references to cloning dinosaurs, à la 'Jurassic Park.'

Colin Tudge at the *Daily Mail* was among those who also brought up the mammoth, which still exists in the form of some frozen (and probably very badly damaged) cells from the permafrost. "Personally, I hope that we can recreate mammoths," Tudge wrote. "I feel cheated that they are no longer with us. They almost made it into modern times — and would have, for sure, if our ancestors had not killed them off. To restore them would be a kind of atonement. But to restore the dinosaurs seems to me to be almost evil: science without restraint; science as pornography."

Robert Lanza, vice president of medical and scientific development at ACT reassured many reporters that dinosaurs are out of the question. But he did speak about the urgent need to do something about current extinctions, telling CNN and others that "There are over 100 species that go extinct every day."

Those would presumably be the as-yet-undiscovered species that are lost as rainforest is cleared. And if he's putting his money where his mouth is, we can anticipate ACT's next research project: nuclear transfer in the beetle.

Richard F. Harris is a science correspondent at National Public Radio and past president of the National Association of Science Writers.
E-mail: rharris@nasw.org